DOCUMENT RESUME

ED 096 366 UD 014 530

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TITLE	The Effects of a Three Year Inter-Racial Preschool Program on Cognitive and Social Development. (IPSIP).
INSTITUTION	Cincinnati Public Schools, Ohio. Dept. of Research and Development.
PUB DATE	Apr 74
NOTE	17p.; Paper presented at the Annual Meeting of the American Educational Research Association (59th, Chicago, Illinois, April 1974)
EDRS PRICE	MF-$0.75 HC-$1.50 PLUS POSTAGE
DESCRIPTORS	Caucasian Students; *Cognitive Development; Economically Disadvantaged; Longitudinal Studies; Negro Students; Parent Education; Preschool Children; *Preschool Programs; *Program Evaluation; Racial Integration; *School Integration; Small Group Instruction; *Social Development; Urban Education
IDENTIFIERS	Elementary Secondary Education Act Title III; ESEA Title III; *Impact of a Preschool Interracial Program; IPSIP; Ohio

ABSTRACT

The Impact of a Preschool Interracial Program (IPSIP) project, funded under Title III of the 1965 Elementary Secondary Education Act, was designed to test the hypothesis that intervening with sufficient impact in the early lives of environmentally deprived children will produce a significant, lasting effect on their cognitive and social development. The IPSIP program involved the comparison of two treatment groups with a control group. Group 1 received a full-time classroom program and the parent education program. Group 2 received only the parent education program, and Group 3 served as a control group for the other groups. Each group contained both economically advantaged and disadvantaged children and similar racial balances. The IPSIP classroom curriculum provided a planned sequence of learning events designed to impact the cognitive, social, and physical motor development of children. The parent education program provided for involving parents in the education of their children. The program provided for instruction in, and practice of behaviors which support learning. Children for the project were located in a changing community in northeastern Cincinnati. Most of the 223 children began the project at age 3 and continued through age 5. (Author/JM)

Program Evaluation Branch

Department of Research & Development

ED 096366

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THE EFFECTS OF A THREE YEAR INTER-RACIAL PRESCHOOL PROGRAM ON COGNITIVE AND SOCIAL DEVELOPMENT (IPSIP) ESEA TITLE III

Presented at annual meeting of the
American Educational Research Association
Chicago, Illinois

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April, 1974

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THE EFFECTS OF A THREE YEAR INTER-RACIAL PRESCHOOL PROGRAM ON COGNITIVE AND SOCIAL DEVELOPMENT

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Introduction

The IPSIP project, Impact of a Pre School Interracial Program, ESEA Title III, was designed to test the hypothesis that intervening with sufficient impact in the early lives of environmentally deprived children will produce a significant, lasting effect on their cognitive and social development. The effects of this three-year experimental program involving 223 advantaged and disadvantaged students are presented. The report also discusses some of the problems of evaluating a preschool program in a public school setting. Specific problems include: 1) instrument selection and validity, 2) maintaining control groups in naturalistic settings, and 3) developing and maintaining community support.

Previous research (Kirk, 1958) had established that extended preschool intervention could significantly improve the I.Q. of disadvantaged children. Other researchers (Klaus and Gray,1968) reported that intervention in the home environment produced immediate if irregular benefits to children. Several authors have reported I.Q. gains from pedagogic intervention (Hodges and Spicker, 1967; Spicker, Hodges, and McCangless, 1966; Weikart, 1967). Other researchers have noted that I.Q. level of a majority group can both effect and limit the extent of I.Q. gains that can be induced in subgroups sharing educational and social experiences (Katz, 1967). The intervention can, on present evidence, be justified throughout the recognized period of mental development (Fowler, 1962a, 1962b).

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Treatment

The IPSIP program involved the comparison of two treatment groups with a control group. Group One received a fulltime classroom program and the parent education program. Group Two received only the parent education program and Group Three served as a control group for the other groups. Each group contained both economically advantaged and disadvantaged children and similar racial balances.

The IPSIP classroom curriculum provided a planned sequence of learning events designed to impact the cognitive, social, and physical motor development of children. The parent education program provided for involving parents in the education of their children. The program provided for instruction in, and practice of behaviors which support learning.

Staff Training

Heavy emphasis was placed upon staff development. During the first year, the teachers received a four week pre-service workshop conducted by the Arlitt Center, University of Cincinnati. Further, they met with the same Arlitt consultant one afternoon a week for an additional ten weeks after the program had begun. A different consultant, a professor from the College of Education, University of Cincinnati, met with the teachers one afternoon a month during the second and third years. In addition, a school system psychologist conducted special workshops for the areas of child management and developmental skills. Finally, visiting consultants in art, music, and body-management also conducted in-service training sessions as the interest/need arose.

Parent Training

Four pre-service programs were held for all parents. Attendance at three of four programs was an initial requirement for eligibility for participation in IPSIP. The programs were repeated four times per week: morning, afternoon, and two evenings. The purpose, philosophy, and responsibilities of

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IPSIP were explained during these sessions.

After the children had been selected and the classes started, the parents in Group One (classroom) had regularly scheduled monthly meetings with the teacher for briefings in home and classroom educational techniques. Most became very effective volunteer classroom aides. One parent who had never even thought about teaching, became so skillful that she was hired first as a substitute and then full time by IPSIP. Visiting "Experts", and IPSIP had many, unanimously agreed that she was one of the best "Natural" teachers they had ever seen.

Group Two parents had the opportunity to participate in ten two-hour workshops which were held one night per week. About two-thirds of the parents attended eight or more sessions. Replacements for Group One "dropouts" were randomly drawn from Group Two.

Parent Community Involvement

The interests and talents of both parents in the programs and other interested community persons were identified and utilized through the program's Parent Advisory Council and school parent groups. Parent participation was matched with project needs in such areas as artwork, transportation, testing, and classroom related duties such as reading stories, assisting on field trips and in learning centers, dramatic presentation, and a seemingly endless list of special talents. The project evaluator, for example, had a pool of over 100 assistants, most with college degrees and some with highly specialized skills, to help him administer tests, gather data, and think through evaluation plans. The major objectives of the program were:

1. A measured 10 point rise in I.Q. for the disadvantaged children participating in IPSIP.
2. Gains in I.Q. for the advantaged group.
3. Unbiased peer relationships among Group One students.

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4. Healthy racial self concepts.

Methods

Selection of Students. Children for the project were located in a changing community in northeastern Cincinnati which is a single high school subdistrict. The area includes eleven public elementary schools which represent a cross section of racial and SES backgrounds. All three-year-old preschool children in the district (N-1000) were invited to participate.

Approximately 10,000 combination announcement /application forms were distributed throughout the area during September, 1970. Although the schools were the primary dissemination vehicle, churches, synagogues, and community centers were also very helpful. Likewise the newspaper cooperated by carrying a small feature story and application form. A total of 306 valid applications were received.

Five parents, three children, and three members of the administrative staff participated in the stratified, random selection.

The overall composition of the children in Group I was:*

	Number	Percentage
Boys	47	52
Girls	43	48
Black	38 (22 advantaged - 16 disadvantaged)	42
White	52 (38 advantaged - 14 disadvantaged)	58
Advantaged	60	67
Disadvantaged	30	33

The composition of Group II was:*

	Number	Percentage
Boys	47	50.5
Girls	46	49.5
Black	37	39
White	56	61
Advantaged	86	93
Disadvantaged	7	6

The composition of Group III was:*

	Number	Percentage
Boys	16	47
Girls	17	53
Black	11	33
White	22	67
Advantaged	32	97
Disadvantaged	1	3

*Distributions reflect final groupings included in results.

It is well known that maintaining equivalent groups, especially control groups, in naturalistic settings is a real challenge. The fact that 33 families remained active in the control group is gratifying. It is believed that the thorough, mandatory program orientation meetings held during the four weeks prior to the initial assignment of subjects to groups helped to maintain some conscious program loyalty among even those parents who were excluded from playing an active part in the program.

Program Organization

There were six preschool classes, fifteen children in each, approximately half boys and half girls, and at least one third of the enrollment black and one third of the enrollment economically disadvantaged. There was one teacher for each class with one to three parents assisting in the classroom. Parents scheduled their time with the teachers of the class their child attended.

Three classrooms had traditional classroom environment, two were open and one was modified Montessori. The program activities included cognitive, social and physical activities. Children arrived at 8:45 and departed at 11:30 a.m. Teachers spent the afternoon planning their programs and meeting with parents or staff.

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A similar group of 90 families were assigned to Group Two, the Parent Education group, whose activities were previously discussed. The remaining families were assigned to the control group.

Instrumentation

To monitor cognitive change, children in both the control and experimental groups were tested periodically, over the three year period with the Peabody Picture Vocabulary, Apell Test, and the Boehm Test of Basic Concepts. Annual sociometric studies were utilized to monitor peer relationships. Racial self concepts were tested utilizing the Clark Doll Study (Clark, 1939). No demonstrably valid measures of self concept could be located. Several attempts were made to prove the validity of such measures, however, none were successful.

During the course of the three years that IPSIP was funded under Title III, many "Tests" and "Instruments" purporting to measure characteristics like self-confidence, ability to resolve conflicts, innate curiousity, etc. were suggested, studied, and often pilot tested. None could be shown to have even the slightest shred of credibility let alone reliability or validity. As one illustration of this, a locally developed "Smiles" test, not unlike many other similar tests that are reportedly in use around the country, was suggested as a likely measure of self-concept. It had been widely used in local studies and the results accepted on face value. However, when the results of a comparison between eight teachers' judgements and the measured outcome were cast in 3 X 3 frequency tables and a chi square computed, there was no correlation between teacher judgement and tested outcome. The contingencies coefficient was -.23; N=152. The eight teachers were veteran teachers; the test was made in February which permitted ample time for the teachers to be familiar with the characteristics of her students.

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Results

a. Cognitive Growth

Primary measures of cognitive gains were made by use of three standardized tests: The Peabody Picture Vocabulary Test; Boehm Test of Basic Concepts; and the Apell Test. Described below are the general trends and findings.

Peabody Picture Vocabulary Test (PPVT)

The graph below shows the general upward trend of tested I.Q. scores for the advantaged control, advantaged classroom, and the disadvantaged classroom groups. There was no disadvantaged control group due to the high attrition rate among the disadvantaged group. Identical groups are represented on each point.

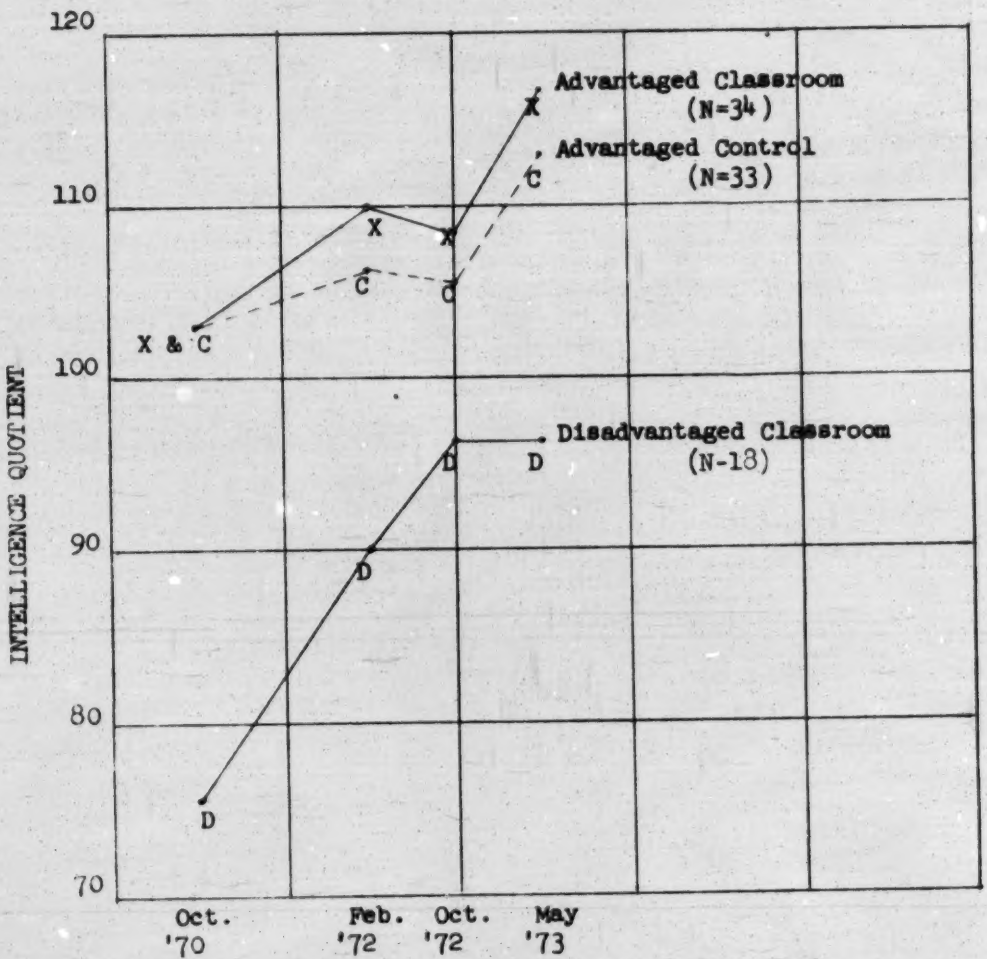

Figure 1: Mean Scores on Peabody Vocabulary Test

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The Apell Test

A comparison of the disadvantaged with the advantaged students was made in April of 1971 and again in April, 1972. The disadvantaged students' mean score, as tested by the Apell, rose from 29.8 in 1971 to 38.6 in 1972 -- a mean rise of just less than nine points. The advantaged students tested at 35.4 in 1971 and tested at a mean of 41.6 in 1972. When comparing the disadvantaged with the advantaged students in 1971, a one-way analysis of variance indicated a significance beyond .01 level. However, in 1972, when the disadvantaged students are compared with the advantaged, there is no significant differences between the two. This, in effect, is saying that disadvantaged students as a group are not significantly different from the advantaged students as a group in 1972. The summary of the data and the analysis of variance summaries are listed below.

Table 1. Summary Data and ANOVA (comparing advantaged and disadvantaged students, April, 1970-71 and 1971-72) Apell Test

ANOVA - 1970-71	ADVANTAGED GROUP VS. DISADVANTAGED GROUP				
	SS	df	MS	F	P
Between	436.28	1	436.28	10.17	.01
Within	3,217.15	75	42.90		
Total	3,653.43	76			
ANOVA - 1971-72					
	SS	df	MS	F	P
Between	126.93	1	126.93	3.33	ns
Within	2,896.07	76	38.11		
Total	2,927.96	77			

The Boehm Test of Basic Concepts

Two comparisons were made for the October study: The first compared the 18 disadvantaged students with the 32 classified as advantaged. While there was

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a 5 point difference in mean score in favor of the advantaged (37.8 vs. 32.9), it was not enough to be of statistical significance as tested by the Mann-Whitney U procedure.

The second comparison was between the advantaged IPSIP students and the advantaged, historically high achieving, Losantiville kindergarten control students. While the IPSIP advantaged were slightly higher (37.8 vs. 37.5), there was not nearly enough difference to be of significance. The actual data summaries are shown in Table 2 below:

Table 2. Boehm, Form A, October, 1972.

	IPSIP Kindergarten Disadvantaged	Advantaged	Control Kindergarten Advantaged
EX	592	1,247	450
EX^2	20,176	49,485	17,068
N	18	33	12
AVERAGE	32.88	37.78	37.50
National %ile (MID SES)	50	75	75

Virtually the identical group of IPSIP children were retested with the Boehm in May, 1973. The actual mean difference between the advantaged ($\bar{X}$=42) and disadvantaged ($\bar{X}$=39.8) groups was reduced to 2.2 points. Probably some of the lessening of difference between the two groups is attributable to an increase in the number of advantaged children who "topped-out" on the Boehm. The data are summarized in Table 3. The one way ANOVA is, of course, non-significant.

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Table 3. Boehm, Form A May, 1973.

		Disadvantaged	Advantaged
Σx	=	718	1,345
Σx^2	=	29,198	57,951
N	=	18	32
$\bar{X}$	=	39.8	42
sd		6.2	6.7

ONE-WAY ANOVA - ADVANTAGED VS. DISADVANTAGED

	SS	df	MS	F	P
Between	52.87	1	52.87	1.28	ns.
Within	1,976.75	48	41.18		
Total	1,929.62	49			

b. Social/Racial Development

There were basically two major continuing studies done in the area of social/racial interactions. There was a sociometric study which was replicated four times, and a doll study. Summary highlights are included in this section.

Sociometric Studies

The four sociometric studies were conducted in June, 1971; February, 1972; November, 1972; and May, 1973. There was a good percentage of interracial friendships evidenced in all of the studies. The summary of the results are indicated below:

Table 4. Sociometric Studies - IPSIP - June, 1971; February, 1972; November, 1972; May, 1973.

		CHOICE OF PLAYMATES			
Race of Respondent	N	Both Black	Mixed	Both White	Date
Black	26	5	7	14	June, 1971
White	41	5	15	21*	June, 1971
Black	37	8	16	13	February, 1972
White	44	9	18	17	February, 1972
Black	28	7	15	5	November, 1972
White	25	5	9	10	November, 1972
Black	27	6	16	5	May, 1973
White	26	4	7	15*	May, 1973

*$p. < .05$ chi square

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Although two of the studies proved to have significant chi squares, the June, 1971, study was significant because of extensive interracial friendship which was viewed as an encouraging sign. The May, 1973, study indicated a perfectly random selection as far as the black students were concerned (about 75% cross racial friendships) but a slightly skewed choice pattern for whites (about 45% cross racial friendships).

Doll Study

In the late 1930's, Dr. Kenneth B. Clark, now chairman of the department of psychology at Howard University, published a study on race identification which has since become a classic. The study is generally referred to as "Clark's Doll Study." In his study, Dr. Clark asked his subjects, six and seven-year-old black children, to choose between identical black and white dolls in response to a series of stimulus statements. (See table 5).

A modified replication of his study seemed to be of particular interest to the IPSIP project. The two major differences between Clark's study and our study are:

1. We interviewed both black and white children.
2. The age of our students was three and four rather than six and seven.

The most impressive fact about the Doll Studies seems to be the wide variety of belief and acceptance of the study on one hand, and skepticism and rejection on the other. The fact that there is so much disagreement among psychologists, parents, educators, and researchers gives the appropriate caution flags to either accept the study on face value, reject it as a complete farce, or accept what pleases while rejecting the rest.

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Suffice to say that in spite of exhaustive efforts, it was impossible to find truly equivalent dolls. As an illustration, most children and adults who have examined the dolls agree that the white girl doll does look happiest. Although the differences are subtle, her smile is more pronounced than her black counterpart and her party dress looks more cheerful than the coveralls worn by the boy dolls. The results with chi square probabilities are shown in Table 5.

Table 5. Doll Study Results, IPSIP, June, 1972, Average Age 4 Years, 6 Months

Stimulus: "Give me the doll that:	WHITE CHILDREN N=40			BLACK CHILDREN N=32		
	White doll	Black doll	P	White doll	Black doll	P
1. You like best	27	13	<.05	23	9	<.05
2. Is a nice doll	22	18	ns	19	13	ns
3. Is a bad doll	10	30	<.01	7	25	<.01
4. Is the happiest	33	7	<.01	24	8	<.01
5. Has nice color	30	10	<.01	18	14	ns
LOOKS LIKE						
6. A white child	38	2	<.01	31	1	<.01
7. A black child	1	39	<.01	1	31	<.01
8. You	37	3	<.01	7	25	<.01

A complete discussion of this study is beyond the intent of this paper. The data summaries (see appendix) reflect 72 of the IPSIP children who had been in an interracial preschool for nearly two years (November, 1970 - June, 1972). Their average age would be about 4.5 years.

Summary

The ESEA Title III Program, Impact of a Pre School and Interracial Program, compared two treatment groups and a control group. Most of the children (n=223) began the project a age three and continued through age five. The groups were racially and economically balanced; standardized I.Q. and achievement tests were administered periodically throughout the three year

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project. At the end of the third year, there was a mean 23 point I.Q. rise for the disadvantaged students who remained in the treatment group. The advantaged students showed an average 13 point gain. Sociometric studies showed little or no racial bias in choicing playmates.

Approved by:
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RON NIEMAN
JULY - 1972

DATA SUMMARY
DOLL STUDY - JUNE 8, 1972

Question:
Give Me The
Doll That: 1. You Like Best 2. Is A Nice Doll 3. Is A Bad Doll 4. Is the Happiest 5. Has Nice (Skin) Color 6. Looks Like A White Child 7. Looks Like A Black Child

Boys	BB	BG	WB	WG	BB	BG	WB	WG	BB	BG	WB	WG	BB	BG	WB	WG	BB	BG	WB	WG	BB	BG	WB	WG	TOTALS
WHITE	3	3	8	8	4	4	5	9	7	11	2	2	2	2	7	11	6	1	8	7	1	0	14	7	22
BLACK	1	4	5	7	1	6	3	7	7	6	2	2	3	2	6	6	1	3	6	7	0	0	10	7	17
GIRLS																									
WHITE	1	6	3	8	1	9	2	6	11	1	5	1	0	3	4	11	1	2	6	9	1	0	6	11	18
BLACK	1	3	2	9	1	5	4	5	8	4	2	1	0	3	5	7	2	8	3	2	1	0	6	8	15
TOTALS	6	16	18	32	7	24	14	27	33	22	11	6	5	10	22	35	10	14	23	25	3	0	36	33	72 GT
	22		50		31		41		55		17		15		57		24		48		3		69		
																					69			3	

8. Looks Like You

BOYS	BB	BG	WB	WG
WHITE	1	0	17	4
BLACK	12	1	2	2
GIRLS				
WHITE	0	2	6	10
BLACK	3	9	0	3
TOTAL	16	12	25	19
	28		44	

APPENDIX

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